



The history of the active anti-screening campaign

The Cochrane Report:

Gøtzsche PC, Olsen O. **Is screening for breast cancer with mammography justifiable?**

Lancet 2000;355:129–34.



Researchers asserting that the majority of previous findings on an issue are wrong have a responsibility to check their facts *and* methodology very carefully. The scientific community is unlikely to be dissuaded from its consensus by a paper containing errors of fact.



The history of the active anti-screening campaign

- Gøtzsche published his views on screening mammography twice: January 2000 and October 2001 in *The Lancet*, *first without informing the Cochrane Breast Cancer Review Group and*
- The second time he published a version that the review group refused to approve.

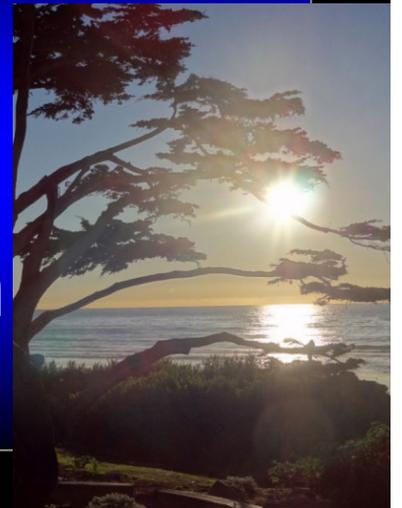
Dean, PB. *J Amer Coll Radiol.*,
2004 Jan;1(1):3-7.



The history of the active anti-screening campaign

The publication emerging from the Nordic Cochrane Center (Director: Peter C. Gøtzsche)

- Lacks access to individual patient data *and*
- Fails to adhere to well established evaluation methods.



- These elementary limitations were immediately apparent to competent investigators, some of whom published rather harsh criticism.

The history of the active anti-screening campaign

The Cochrane Report:

Gøtzsche PC, Olsen O. Is screening for breast cancer with mammography justifiable? *Lancet* 2000;355:129–34.



“The Lancet paper by Gøtzsche and Olsen ... is not simply controversial, it contains a number of serious statistical mistakes. **It is a worthless piece of work which if it had been produced by one of our masters students, would have been sent back with demands for a complete rewrite**“. N Day, Professor of Public Health, University of Cambridge, UK

“Gøtzsch

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7(1):1.

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"The most recent breast cancer screening controversy about whether mammographic screening benefits women at any age: nonsense and nonscience".

Prof. Dan Kopans, Am J Roentgenol. 2003 Jan;180(1):21-6.

POINT-COUNTERPOINT

On the efficacy of screening for breast cancer

David A Freedman, Diana B Petitti, and James M Robins

International Journal of Epidemiology 2004;33:43–55

DOI: 10.1093/ije/dyg275



KEY MESSAGES

- There is good evidence from clinical trials that mammographic screening reduces the death rate from breast cancer.
- The critique by Gøtzsche and Olsen has little merit and has generated much confusion.

*Gøtzsche's Quixotic Antiscreening Campaign:
Nonscientific and Contrary to Cochrane Principles*

Dean, P.B., MD., J Amer Coll Radiol., 2004 Jan;1(1):3-7.

- Evaluations of evidence-based medicine should be performed by individuals who have personal competence in the subjects they choose to evaluate.



Gøtzsche's Quixotic Antiscreening Campaign: Nonscientific and Contrary to Cochrane Principles

Dean, P.B., MD., J Amer Coll Radiol., 2004 Jan;1(1):3-7.

Gøtzsche has built his own antiscreening bias into a nonscientific, personal campaign to discredit breast cancer screening, breast cancer surgery, and breast cancer oncology.

In the process he has done harm to the Cochrane Collaboration, which has been powerless to censure his actions.



The history of the active anti-screening campaign

- Denmark has been a source of much of the criticism of breast cancer screening over the past decade, beginning with a *published bias against all form of screening* by **Dr. Peter Goetzsche**, the Director of the Cochrane Institute in Copenhagen.

- **The Lancet, Vol 349
February 1, 1997.**



Why does vehement opposition to screening come from Denmark, which has one of Europe's highest breast cancer mortality rates?

The online publication by Jorgensen and Gotzsche in **BMJ** 2010; 340:c1241 doi:10.1136/bmj.c1241 failed to demonstrate a mortality reduction from breast cancer because the authors did not use reliable, individualized data: “Our data did not allow identification of individual women”.



*Why does vehement opposition to screening
come from Denmark, which has one of Europe's
highest breast cancer mortality rates?*



The lack of precision of their analysis is reflected in their text
“is unlikely”, “it may be reasonable”, “suggest”, “may have”,
“would be expected”, “could be”, etc.

Why does vehement opposition to screening come from Denmark, which has one of Europe's highest breast cancer mortality rates?

Denmark has been a source of much of the criticism of breast cancer screening over the past decade

Denmark has one of the highest breast cancer death rates in Europe, similar to that of Serbia



Comment

Finland and Sweden have among the lowest breast cancer mortality rates in Europe, although all the Nordic countries use identical breast cancer treatment guidelines.



Comment

The health care systems among these countries are similar in most other aspects as well,

except that Finland and Sweden introduced nationwide screening more than two decades ago.



*BBC Radio interview with the Director of the
Cochrane Inst. in Copenhagen, Denmark,
Dr. P. Goetzsche*

CLICK THE ICON BELOW TO HEAR THE FULL INTERVIEW





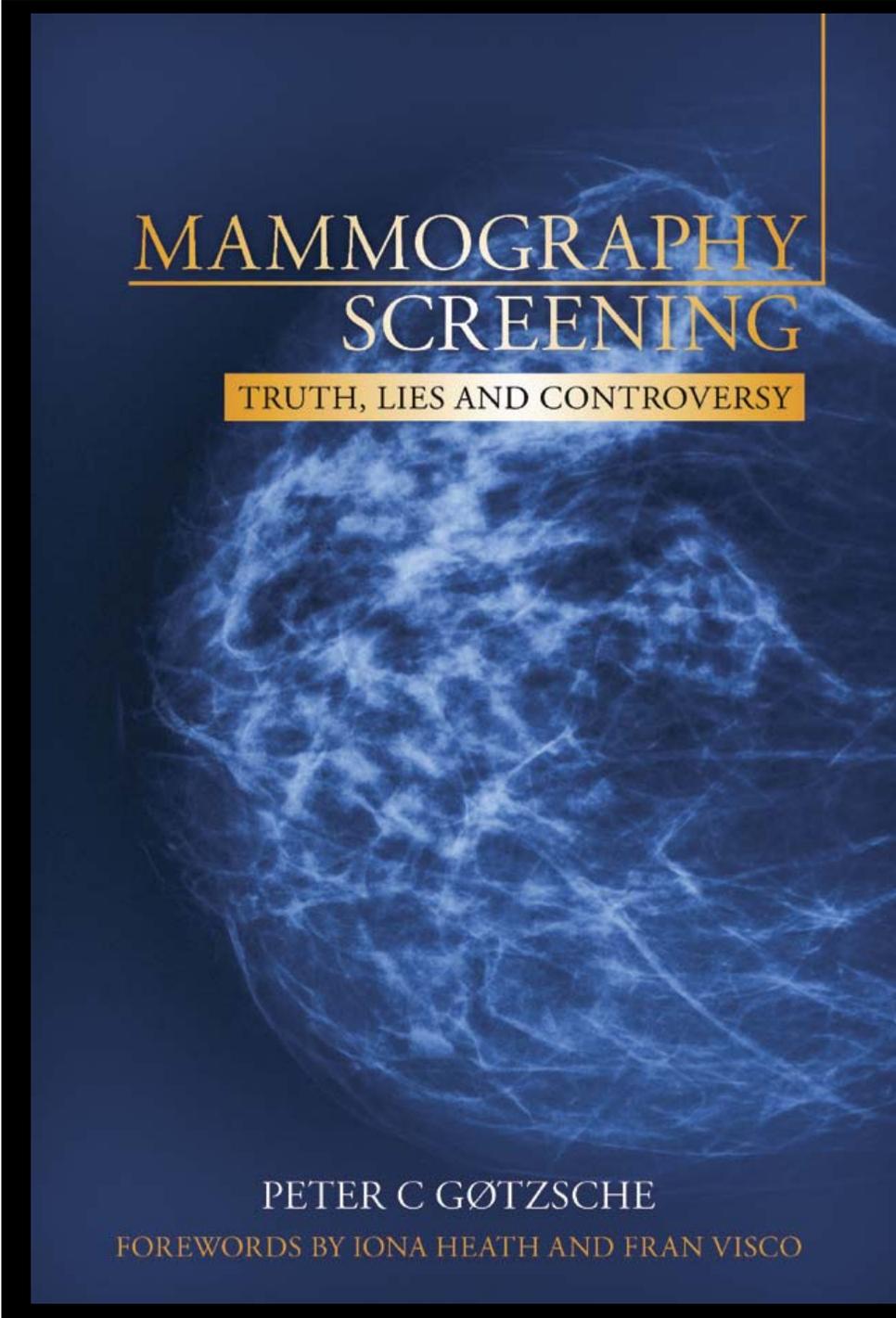
The

state

er,

view

"What women should do is, as they have always done, if they find something unusual, go and see a doctor, but don't examine yourself regularly. It has no effect and it doubles the number of biopsies and it also induces a lot of anxiety of course...so, so, there is general agreement now that women should not be advised to examine themselves every month. That's against recommendation".



MAMMOGRAPHY
SCREENING

TRUTH, LIES AND CONTROVERSY

PETER C GØTZSCHE

FOREWORDS BY IONA HEATH AND FRAN VISCO

“The most effective way
to decrease women’s risk
of becoming a
breast cancer patient
is
to avoid
attending screening”

A group of **41 screening experts**, exasperated by the steady flow of non-scientific criticism, published a letter in The Lancet.

Lancet. 2011 Nov 19;378(9805):1775-6.



"Although the wider scientific community has long embraced the benefits of population-based breast screening, there seems to be an active anti-screening campaign orchestrated in part **by members of the Nordic Cochrane Centre.**

These contrary views are based on erroneous interpretation of data from cancer registries and peer reviewed articles. Their specific aim seems to be to support a pre-existing opposition to all forms of screening

41 signatures



Lancet. 2011 Nov 19;378(9805):1775-6.

The key players in the active anti-screening campaign

Dr. Peter Goetzsche and KJ Jørgensen

Denmark

Zahl P-H and Dr. Kalager

Norway

Dr. Philippe Autier

Belgium



The key players in the active anti-screening campaign

Dr. Cornelia Baines

Canada

Dr. Gilbert H. Welch

USA



*The key players in the active
anti-screening campaign*

The Canadian Task Force

*U.S. Preventive Services
Task Force (USPSTF)*



*The medical journals giving a forum
for the active anti-screening campaign*



The Lancet

British Medical Journal

New England Journal of Medicine (NEJM)

Journal of the National Cancer Institute (JNCI)

Archives of Internal Medicine

The term "controversy" hardly seems to apply to mammography screening.

What ought to be regarded as controversial is the regular opportunity provided by scientific journals and mass media for a group of *pseudo-skeptics* to repeat over and over again the same flawed science and logic to question the value of screening.

Duffy SW et al. CA Cancer J Clin. 2002 Mar-Apr;52(2):68-71.



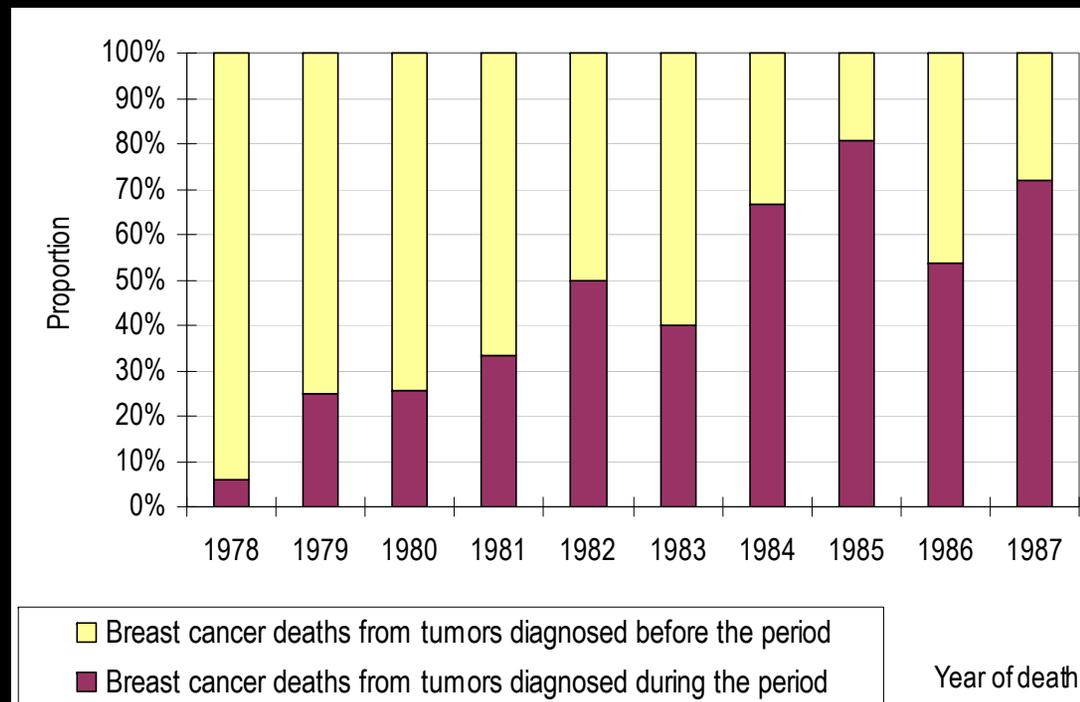
Comment

None of the publications questioning the benefit of early detection on mortality from breast cancer had access to individualized patient data, making their claims that modern mammography screening plays little or no role in reducing breast cancer death *simply a biased guess.*



Demonstration of the error introduced by one of their approximations

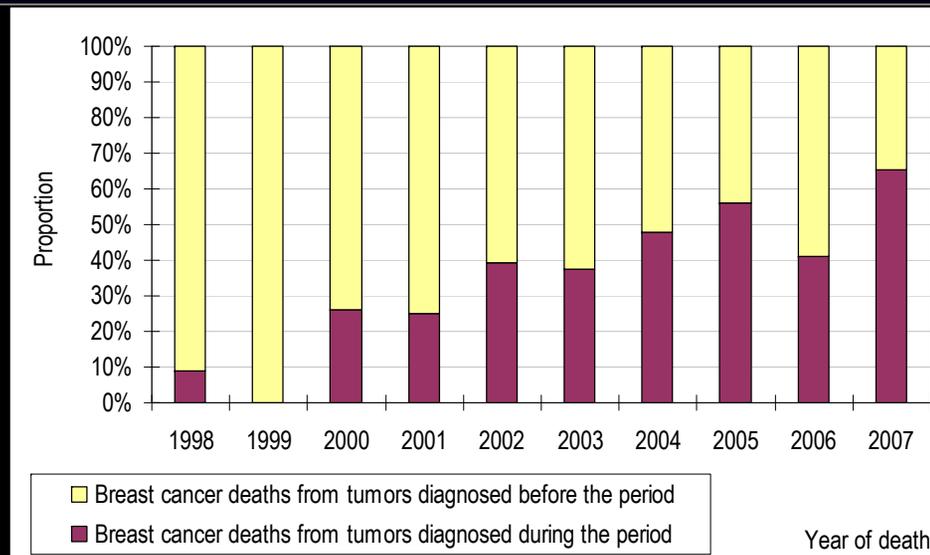
*Incidence-based mortality within two
ten-year periods in Dalarna County, Sweden.*



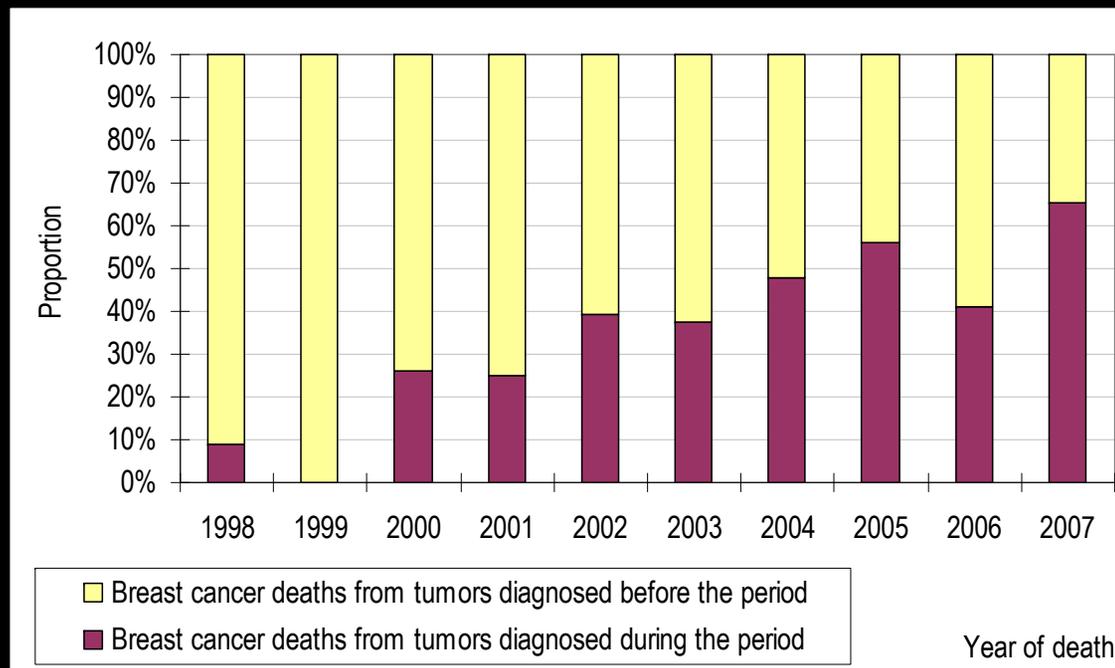
Proportion of breast carcinoma deaths between 1978-1987, Dalarna, Sweden according to date of diagnosis occurring before (yellow columns) or during (red columns) this period

A majority of breast cancer deaths occurring within the screening decade –
were from breast cancers detected prior to that decade.

One cannot expect mammography screening to have an impact on patients whose cancer was treated **before screening started.**



Incidence-based mortality twenty years after introduction screening in W County, Sweden.



Proportion of breast carcinoma deaths between 1998-2007, Dalarna, Sweden according to date of diagnosis occurring **before (yellow columns)** or **during (red columns)** this period. *Cancer 2002;95:458-69.*

Comment by Nyström & Törnberg

Jørgensen et al “were unable to find an effect of the Danish screening programme on breast cancer mortality” (**BMJ 2010; 340:c1241 doi:10.1136/bmj.c1241**).

We would have been surprised if they had been able to demonstrate an effect with respect to the method used.

...”for the period 1993-2002 at least 50% of the breast cancer deaths were diagnosed before the start of the screening program”. *Lennarth Nyström & Sven Törnberg, Cochrane centre produces flawed research* **BMJ 6 April 2010**

Mammography Screening and Breast Cancer Mortality in Sweden

P. Autier, A. Koechlin, M. Smans, L. Vatten, M. Bonio

Conclusion: “County-specific mortality statistics in Sweden are consistent with studies that have reported limited or no impact of screening on mortality from breast cancer”.

J Natl Cancer Inst DOI:10.1093/jnci/djs272 2012

Autier et al's methodological shortcomings caused them to inflate the number of breast cancer deaths in the screening period **by including cases diagnosed before screening began.**

It is unfortunate that a manuscript with such flawed methodology was published, an outcome that naturally leads to speculation about the robustness of the **peer-review process** in this instance.



“**Screening** is having, at best, only a small effect on the rate of death from breast cancer”.

Archie Bleyer, M.D., and H. Gilbert Welch, M.D., *N Engl J Med*.
November 22, 2012;367(21):1998-2005.



H. G. Welch's misleading conclusions were made without his knowing

- Which woman was or was not screened, or how often,
- or, even if a breast cancer was diagnosed in a woman who did or did not get a mammogram.

Welch admits: "Unfortunately, because the [Surveillance, Epidemiology, and End Results (SEER)] program does not collect data on the method of detection, **we were unable to distinguish screening-detected from clinically detected cancers.**"



H. Gilbert Welch is a Professor of Medicine at the Dartmouth Medical School.

Welch *et al* state that "We were forced to make an assumption to capture the downstream benefit of screening"

Arch Intern Med. 2011 Dec 12;171(22):2043-6.



The "new studies" published by Welch, which he calls "the view from space," can be considered several steps backward for scientific analysis.

They all lack key data required for accurate results, a deficiency which forces them to make multiple assumptions and even resort to guesswork.

Welch does admit to these deficiencies in his *New England Journal of Medicine* publication, as follows:

- "Tables 1 and 2, however, are based on assumptions ..."
- "We were forced to make some assumptions ..."
- "The simplest approach was to assume ..."
- "In our best-guess estimate ..."
- "Our assumption ... was admittedly arbitrary ..."
- "Fourth, our best-guess estimate ..."
- "Our method did not allow us to disentangle the two. We did, however, estimate ..."
- "This analysis suggested ..."

These terms of imprecision were used more than
71 times in that *NEJM* article.

Women deserve information based on reliable evidence,
but Welch offers women *statistical manipulations*
weakened by missing facts;
as Welch puts it, **his research is "a view from space."**



CLICK THE PICTURE BELOW TO VIEW THE VIDEO



*Number of lives saved according
to Dr. Welch*

2,500 women needed to go through annual mammography screening examination to avoid one breast cancer death!



The Two-County Swedish Trial

Radiology, Sept 2011

There were **1,334** mammographic screening examinations per death avoided. Had the screening continued for ten years the absolute benefit would have been higher, with approximately **300** women needed to screen to save one life

The Two-County Swedish Trial

Interpretation

Between **8** and **11** breast cancer deaths would be prevented if we screened **1,000** women every two years from ages **40** to **69**

The Independent UK Panel on Breast Cancer Screening led by Professor Sir Michael Marmot

“For every **235** women invited for screening, one breast cancer death will be prevented, representing **43** breast cancer deaths prevented per 10 000 women aged 50 years invited to screening **for the next 20 years.**”

Independent UK Panel on Breast Cancer Screening.
**The benefits and harms of breast cancer screening:
an independent review** *Lancet* 2012; 380: 1778–86.,

CLICK THE PICTURE BELOW TO VIEW THE VIDEO

Screening has benefits and harms

Among 2500 women age 50 undergoing annual mammography for 10 years...

Benefits	Harms
1 - 2 will avoid a breast cancer death	\approx 1000 will have at least one false positive result <i>(\approx half will have a biopsy)</i>
	5 - 15 will be overdiagnosed and receive unnecessary treatment for breast cancer

The New York Times

November 21, 2012

Cancer Survivor or Victim of Overdiagnosis?

By H. GILBERT WELCH

Hanover, N.H.



AuntMinnie Dec 13, 2012

Mammography's alleged harms: Separating fact from fiction

By Dr. László Tabár, Dr. Peter B. Dean

In spite of his shaky statistical ground, Welch tries to convince his readers that **improvements in therapy are steadily replacing the benefits of early breast cancer diagnosis with mammography.**



Researchers from the U.S. National Cancer Institute and from Europe admit that **"Without individual data it is impossible to completely separate the effects of improved treatment and health service organization from that of screening."**

We can all agree
about breast cancer
information research
which Welch and



reliably informed
evidence-based
patient data,
do not have.

Instead, they base their arguments on inadequate data and multiple assumptions.

- They consider their own estimates on breast cancer mortality superior to the actual facts,
- They allow themselves to speculate on the relative impact of treatment versus screening on breast cancer mortality.

Such flawed statistics and misleading conclusions **should not be used** to misinform women and

Letter to the Editor of NEJM Tabar L, PB Dean

Title: **The alleged harm of having regular mammograms versus the actual harm of not having them: use data, not assumptions.**

It is disconcerting that the NEJM has chosen to publish an article on the purported effect of mammography screening using a database lacking information on the detection and treatment modes of the individual cancer cases.



Dear Prof. Tabár,

I am sorry that we will not be able to print your recent letter to the editor regarding the Bleyer article of 22-Nov-2012.
Thank you for your interest in the Journal.

Sincerely,

Dan L. Longo, M.D.
Deputy Editor. NEJM
Professor of Medicine
Harvard Medical School



Dear Dr. Longo,

Thank you for your mail, which **was in line with our expectation**: our letter would not be published by the NEJM since it **uncovered the terrible flaw in the peer review process of the journal**.

A more detailed description (see the attachment) might make the editorial board realize the problem when the authors use "assessment" and "estimation" instead of actual data to draw conclusions.

Sincerely

László Tabár, M.D.

Dr. Welch presents a mammogram (at YouTube timeline 0:40:52) which he falsely claims to be from the HIP trial from New York in the 1960s.

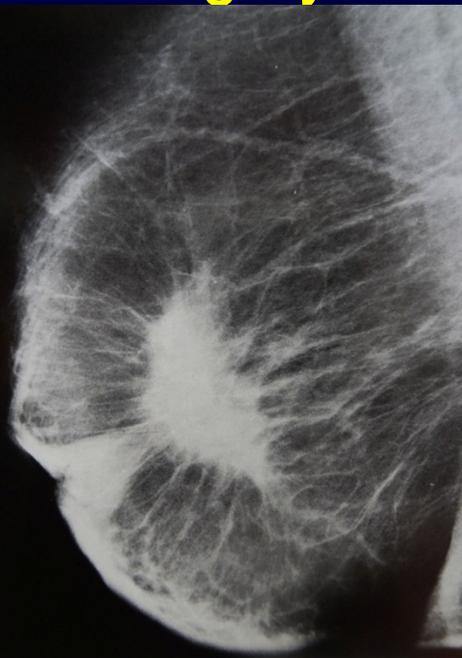
CLICK THE PICTURE BELOW TO VIEW THE VIDEO



This 89 year old Swedish patient of mine had a 5 cm palpable cancer in 1980.



The truth is that Dr. Welch has copied a copyrighted mammogram from the “Teaching Atlas of Mammography” by László Tabár and P.B.Dean – it is case #60 in our book and it is not a screening mammogram. This 89 year old Swedish patient had a 5 cm palpable cancer in 1980. These deliberate misrepresentations in his lecture bring Dr. Welch’s integrity into question.



It is case #60 in our book and it is not a screening mammogram and it is not from the HIP study in New York!

60

An 89-year-old woman with a 1-year history of a slowly growing tumor in the right breast.

Physical Examination

A large, obviously malignant tumor in the right breast.

Mammography

Fig. 60 a, b: Right breast, MLO and CC projections. Centrally located, large (5 cm diameter) stellate tumor. The nipple and areola are retracted. The skin is thickened and retracted over the lower and outer portions of the breast.

Comment

This is an illustrative example of an advanced stellate malignant breast tumor with a large central tumor mass and radiating spicules that retract the areola and skin.

Histology

Infiltrating ductal carcinoma. The tumor infiltrates the lymph vessels.



Fig. 60a

In addition to his misrepresentations below, Dr. Welch's demeaning comments (at YouTube timeline 0:40:52) about the image quality of the mammogram **uncover his incompetence at evaluating mammographic image quality.**

Our book was awarded the **First Prize in Radiology** at the British Medical Association Medical Book Awards in 2012.



